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(54) Title: CONNECTIONLESS MOBILE PARKING SYSTEM (MPS)

(57) Abstract

The present invention is a connectionless mobile parking system and method based on Short Message Services (SMS) communications between the MS (1) and the parking database (5). The invention provides a Parking Command Generator (11) which is an adaptation part of SMS pre-stored in the mobile station, or its SIM card, that produces a Parking Short Message, PSM (12, 4, 17, 23), whenever selected and activated by the user of mobile station who wants to occupy a parking space. The PSM can be activated and be displayed on the display (15) of MS, by selecting the Parking Command (13), from the option menu (14) of mobile station (1), and then be sent to the parking database (5, 29) via SMS facilities of a wireless network (10). The parking database registers the vehicle's arrival time and sends a PSM back to the MS as a confirmation of registration of arrival time of user to the parking place. For departure time of MS, also a same messaging procedure is performed between MS (1) and the parking database (5). In this invention MS is a mobile/cordless etc. telephone that can be taken along with the subcriber and does not need to be mounted in his car.

Connectionless Mobile Parking System (MPS)

A mobile parking system and method utilizing mobile communications systems connectionless infrastructure, specially Short Message Services (SMS) facilities of mobile networks (such as GSM). The present system is comprised of a parking database and mobile/portable telephones/terminals (herein after called mobile station, MS) capable of communicating via SMS, and SMS facilities of the wireless communication networks, either terrestrial or satellite. More specifically, the present invention is based on the principle of Short Message communications between the MS and the parking database, and MS's provided Parking Command Generator which is an adaptation part of SMS in the mobile station that provides a Parking Short Message (herein after called PSM). The PSM can be activated and be displayed on the display of MS, by selecting the Parking Command, and then be sent to the parking database via SMS facilities of a wireless network. The PSM can be pre-stored in the memory of MS or SIM-card (Subscriber Identity Module) as "Parking Short Message" and inquiry including one or more question which can be answered by MS's user, when using a parking space.

The present Mobile Parking System (MPS) also includes a parking database capable of receiving and/or transmitting and handling the "Parking Short Messages" sent or received to/from the Mobile Station (MS) and also capable of measuring the distance between the MS and parking database. The parking database also includes all information about the parking (telephone) subscribers and their vehicles, such as subscriber identity or telephone number, name, address, the number of owned vehicles, the vehicles registration number etc. and also parking statistics such as parking zone number etc. All messages communicated between MS and parking database are transmitted via a wireless communication network capable of receiving, handling and transmitting SMS via a Short Message Services Center (SMSC). The present system and method, creates a new and high penetration service for mobile telecommunications operators, and a user friendly value added service for mobile subscribers. By using the present system the users (subscribers) do not have to be worried about receiving fines (tickets) from a traffic officer. Depending on the position of the parking spaces, different tariffs can be applied in the parking database. The users can take their MS with them when they leave their car - the vehicles do not need to be equipped with a mounted mobile station or other parking devices. By using Short Message Services facilities of GSM which provides an ever increasing coverage and international roaming, all parking messages communicated between the mobile station (MS) and the parking database can be transmitted in a connectionless way via SMSC (Short Message Services Center) of GSM. Those users who do not own any mobile station (e.g. mobile/cordless telephone) can obtain the conventional parking tickets e.g. from the parking stands, that are already existing on the street corners or parking places.

Brief description of the drawings:

Fig 1. presents the inventive Mobile Parking System and method.

Fig 2 and 3. presents Parking Command Generator (PCG) and the Parking Short Message (PSM) generating and the message stream.

Fig 4. Presents the inventive Mobile Parking System (MPS) in a global level.

Fig 5. presents an example of Parking Database information.

Fig 6. presents the minimum daily revenue that operators of two cities, Hamburg in Germany and Helsinki in Finland, can gain by using the inventive MPS.

In MPS the user of MS (1), after having parked his car (2) in a parking space (3), sends a Parking Short Message (PSM) (4) to the parking database (5) which can be considered as a parking control and charging station of the municipality. The PSM sent by MS is transferred via the SMSC of the wireless communication network (10). After this, the parking time will be started to count at the parking database. Then the place of the car can be positioned and also this location information will be sent to the parking database. The position of the car can be defined at the level of cell or at the level of parking space, if required. In parking database, in accordance with each subscriber number (i.e. identification), the user and his/her car number and other required data are recorded in advance. When the driver wants to leave the parking space (3), he/she again sends a PSM (4) to the parking database and therefore his/her departure time will be recorded in parking database (5), indicating that the parking time has finished. The parking charges can be simply added to the telephone bills of its user enabling the mobile operators or service providers to provide Mobile Parking Services to the municipalities and subscribers. Furthermore, in MPS the parking inspector (6) is equipped with a Parking Controlling Unit (PCU) (7), which is another MS (e.g. a mobile phone as an inspecting device) that can receive from the parking database (5) the information about the parked vehicles which are parked near to him. The information about the parked vehicles is sent to PCU (7) of parking inspector based on his/her location. The location of the parking inspector can be a parking zone-related location (8). A parking zone (8) can be considered as a wide area, for example the center of a city or smaller area for example a street. The parking inspector (6) can inform the parking database (5) about his/her location by sending the zone number to the parking database via SMS. Alternatively, the location of parking inspector (6) can be defined in the positioning unit (9), which is connected to the parking database (5). Based on the location (8) of parking inspector (6), the required information (about parked vehicles) is sent to his MS via SMSC of a wireless network (10).

In the present Mobile Parking System (MPS), the mobile station includes a Parking Command Generator (PCG) (11) which is an adaptation part of SMS in the mobile station and that includes the required soft-ware to produce a PSM (i.e. Parking Short Message) (12). The PCG

adds a "Parking" command (13) to the option menu (14) of MS (1) to be activated by user whenever he drives to a parking space. Each time the subscriber wants to use a parking space (belonging to municipality) he/she selects the PCG's command (13) from the option menu (14) of MS and sends it to the parking database. The Parking command (13) activates the PSM (12) and displays it on the display (15) of MS. The PSM (12) can be pre-stored in the memory of MS or SIM-card (Subscriber Identity Module) as "Parking Short Message" and inquiry including one or more question which can be answered by MS's user. In the present connectionless mobile parking system no parking starting or ending times, or tariffs/minutes etc. are required to be entered to MS. The parking starting/ending times are registered in the parking database each time the user of MS send a parking message to the database. The parking tariffs (per minutes or hour etc.) and other required information such as subscriber number or identity, the vehicle's registration number, color, model etc. are already pre-stored in the parking database (5). The parking database can be either an independent unit from other parts of the network or it can be connected to the SMSC or other components of the network (10). The parking database can alternatively be incorporated into the HLR/VLR (Home Location Register / Visitor Location Register) of GSM network.

Followings are two options presented for implementation of this invention.

In first option, Parking Command Generator's (PCG) command (16), selected by user, produces an empty short message (17), to be sent to the parking database (5). Such short message includes no data but only the required information for signaling and the telephone number of the parking database - such an empty message can be sent in present GSM networks. Alternatively, the subscriber identity/telephone number can be added to this short message (17) at the SMSC at the network side before sending it to the parking database. Since no information is required to be entered to PSM by user, this option requires a positioning unit in order to define the location of MS at least at the level of parking zone for tariff purposes. However, if parking tariffs for whole area/city, where the MS is roaming is the same, then no positioning solution is required. For positioning purposes, MS sends the PSM (17) to the parking database two times, frequently, for positioning purposes. It means that when the subscriber selects the PSM to be sent to the parking database, the MS actually sends the parking message two times, one after one (18). The time interval (19) between these two messages are static and known by positioning unit (9) which is connected to the parking database (5). Based on the time interval (19) between these two messages the MS can be located at the level of zone (20), on a circle (21) which indicates in which one of parking zones the vehicle (i.e. MS) is located. This means that the positioning unit (9) measures the time delay between the two frequently sent parking messages. Such a delay is equal to the distance between the MS and positioning unit, indicated in time. By knowing the time delay between the two messages and the velocity of the radio

waves the distance between MS and positioning unit can be easily measured, in meters. The location of MS can be positioned on a circle (20) that occur within one of the parking zones (20) and based on MS's location (i.e. the zone) defines the required parking tariff. In this option no complex positioning service is required from the network side. When user collects his/her car, he/she again sends the same PSM (17) to the parking database. This time MS sends the PSM only once. In this option parking space-related tariffs can be applied. Alternatively, the location of MS can be a BTS-related location (BTS= Base Transceiver Station). The BTS number/identity can be sent along with the parking message to the parking database. The BTS identity can be added to the PSM either when such message arrives to the BTS/BSC (an intelligent option) or, alternatively, the MS after listening to the broadcasting channels of BTS and finding the BTS (i.e. cell) identity number, add it to the PSM before sending the message to the parking database. Based on the cell number parking database is able to define in which parking zone the MS is located.

In second option, the Parking Command Generator's (PCG) command (22), selected by user, produces a PSM inquiry (23) which is displayed on the display of MS (24) whenever the subscriber selects the Parking Command (22) from the option menu of MS. This inquiry (24) may include only one question such as "Parking Zone Number" (25) which should be answered by subscriber (for example) through keypad of MS. Such a inquiry (24) may also include other questions such as "parking space's number" or the name of "street" (26) where the vehicle is parked. Both, the parking space's number and parking zone number can be found from the parking signs (27) at the street near to the parking spaces (3). After the parking zone or space's number has been entered to the PSM inquiry, the user can send (28) it to the parking database (29). In this option, the parking zones (30) are designed to be of circular shapes having a common central point, and the positioning unit (9) (e.g. together with parking database (5)) is located at the central point of these zones (30). Parking zones (30) can be designed in different shapes.

In both above options, when the parking database (which is equipped with required computing station and includes all information about the subscriber and his/her cars) receives a PSM from MS, it registers the vehicles arrival time and selects the relevant tariff, based on the parking space or zone. The parking database may also generates a PSM to be sent to MS indicating that parking time has been started. However, such a message is not necessary if user doesn't want to be sure about the reception of his/her parking message to the parking database. When user collects his/her car, he/she again sends the same PSM (17 or 22) to the parking database. When parking database receives this message (i.e. the PSM), it assumes that the car is leaving the parking space, therefore parking database registers the car's departure time and produce a bill to be sent to the subscriber. The parking bill can be a monthly bill including subscriber's all

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parking services used in that relevant month. Alternatively, the parking bills (total sum) can be added to the telephone bills of the subscribers or the subscriber's bank account can be charged. If the car is parked in a foreign network, the parking database can act as a VLR. When it receives a PSM from MS and detects that the subscriber belongs to another operator or area/country, it sends the bill to the relevant operator. The Mobile Parking System's telephone number can be either an operator-related and regional number (providing parking services only under coverage of that specific network) or it can be a global number with an international roaming possibility. In case of a global number, the subscriber does not need to use different parking numbers when traveling from a city to another. The global number can be either an operator-related number using international roaming or it can be as an international but operator-related number like for example 118 which is used for telephone directory information, or for example 911 (in US) for emergency calls etc. Even though the subscribers can use only one number for their parking services no matter where they are, but the parking tariffs may vary from network to network, municipality to municipality. For example if MS is roaming under the coverage of Hong Kong Telecom, the parking costs are defined according to the parking tariffs in Hong Kong. Therefore, like normal telephone calls, the foreign network charges the subscriber's home network and the home network charges the subscriber for the parking services used in other city or country. Other additional features of the present invention is that, if the PSM is sent during the periods in which parking is free of charge, for example, between 5 o'clock PM and 7 o'clock AM, the parking database may neglects reception of such messages or may take it into account from the next beginning official parking time, if required.

The features characteristic of the present invention are set forth in the following Claims.

Claims

1. A connectionless mobile parking system and method including three main components: the Short Message Services (SMS) facilities of mobile networks (such as GSM), a parking database including subscribers and parking information, and mobile stations (MS) **characterized** in that the mobile stations (1, 7) include a Parking Command Generator PCG (11, 16, 22) which is an adaptation part of SMS in the mobile station and produces a Parking Short Message PSM (12, 17, 23, 4) when the Parking Command (13) from the option menu (14) of mobile station (1) is selected and activated by the user of MS, which after the PSM can be displayed on the display of MS (15, 24) presenting an inquiry including one or more questions (25, 26) which can be answered by the user and then the PSM (12, 23, 4) be sent to the parking database (5, 29) via SMS facilities of a wireless network (10) in order to be charged for the period the parking space (3), where the user have parked his car (2), is used.

2. A mobile parking method as claimed in claim 1, **characterized** in that, the Parking Command Generator PCG (11, 16, 22) can be activated by a Parking command (13) which is stored in the option menu (14) of mobile station (1) and said Parking command displays a Parking Short Message Inquiry pre-stored in the memory of mobile station or SIM card (Subscriber Identity Module) and that said Parking Short Message Inquiry can be answered by user of MS by entering the parking zone number (25) which is a number allocated for a parking area at a street or it is allocated for a part of city, for example center area of the city, and then said Parking Short Message be sent to the parking database.

3. A mobile parking method as claimed in claim 1, **characterized** in that, the Parking Short Message (23) may include one or more questions such as Parking Zone Number (25) that should be answered by user by entering the required numbers through for example keypad of MS, and then be sent to the parking database (5, 29).

4. A mobile parking method as claimed in claim 1, **characterized** in that, the Parking Short Message can be an empty short message (17) sent by MS (1) to the parking database (5) and that said short message includes no data but only the required information for signaling and the telephone number of the parking database which can be pre-stored in such a message (17) and that no other additional information is required to be entered by user and that said parking short message can be transparent to the user and does not need to be displayed each time it is sent to the parking database.

5. A mobile parking method as claimed in claim 1 and 4, **characterized** in that, the empty parking short message is pre-stored under the "Parking" command (13) and that when said

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parking command is selected by user, sends said empty parking message to the parking database (5).

6. A mobile parking method as claimed in claim 1, **characterized** in that, the Parking Short Message can be an empty Short Message (17) to be sent, two times frequently to the parking database (5).

7. A parking database (5, 29) as claimed in claim 1, **characterized** in that, it is capable of receiving and/or transmitting and handling the "Parking Short Messages" sent or received to/from the mobile station (1, 7) and also including a positioning unit (9) capable of measuring the distance between the MS and parking database within a parking zone (20, 30) on a radius (21) where MS (1) is located and that;

   - said parking database also includes all information about the parking (telephone) subscribers and their vehicles, such as subscriber identity or telephone number, name, address, the number of owned vehicles, the vehicles registration number etc. and also parking statistics such as parking zone number etc.; and that,

   - when said parking database receives a PSM (17, 23) from mobile station (1, 7) it may also sends a PSM to the mobile stations (1, 7) indicating that the arrival time of vehicle (2) to the parking space (3) has been registered, and that the parking database (5) sends information about all parked vehicles located near the parking inspector (6) to his MS (7) whenever required.

8. A mobile parking method as claimed in claim 1, **characterized** in that, the Parking Command Generator PCG (11, 16, 22) is a short message-based program pre-stored in the memory of MS (1, 7) or in the SIM-cards and is activated by a "Parking" command (13) pre-stored under the option menu (14).

9. A mobile parking method as claimed in claim 1, **characterized** in that, all mobile stations (1, 7) used in this system are portable/mobile/cordless telephones/terminals including the Parking Command Generator PCG (11, 16, 22) and the Parking Command (13) pre-stored under the option menu (14) of said mobile stations.

AMENDED CLAIMS
[received by the International Bureau on 31 December 1996 (31.12.96);
original claims 1-9 replaced by amended
claims 1-8 (2 pages)]

1. A connectionless mobile parking system utilizing the connectionless means such as Short Message Services (SMS) facilities of mobile networks (such as GSM), a parking database including subscribers and parking information, and users mobile stations (MS), that in conjunction with parking a vehicle in a parking space and in conjunction with terminating a parking period a message including the user's or its car's or mobile station's identity or any other message, except the code of parking spaces, is sent to a database (5) for registration of the parking space, vehicle and the parking period and for determining the parking fee, **characterized** in that the mobile stations (1, 7) or their user cards include a Parking Command Generator PCG (11, 16, 22) which produces a Parking Short Message PSM (12, 17, 23, 4) when the Parking Command (13) from the option menu (14) of mobile station (1) is selected and activated by the user of MS, which after the PSM is displayed on the display of MS (15, 24) presenting an inquiry including one or more questions (25, 26) which can be answered by the user and then the PSM (12, 23, 4) be sent to the parking database (5, 29) via connectionless facilities of a wireless network (10) and be confirmed by said database by sending a message to user's MS as a confirmation for parking time starting or determination.

2. A mobile parking system as claimed in claim 1, **characterized** in that, the Parking Command Generator PCG (11, 16, 22) can be activated by a parking command (13) which is stored in the option menu (14) of mobile station (1) or its SIM-card and said parking command displays a parking message (PSM) inquiry pre-stored in the memory of mobile station or its SIM card (Subscriber Identity Module) and that said PSM inquiry can be answered by user of MS by entering the required information such as parking zone code (25) allocated for a parking area at a street or for a part of or whole city, and then said parking message is sent to the parking database.

3. A mobile parking system as claimed in claim 1, **characterized** in that, the parking message (23) may include one or more questions such as parking zone code (25) that can be answered by user by entering the required information through for example keypad of MS, and then be sent to the parking database (5, 29).

4. A mobile parking system as claimed in claim 1, **characterized** in that, the parking short message can be an empty short message (17) sent by MS (1) to the parking database (5) and that said short message includes no data but only the required information for signaling and the contacting number or address such as telephone number of the parking database which can be pre-stored in such a message (17).

5. A mobile parking system as claimed in claim 1 and 4, **characterized** in that, the empty parking short message is pre-stored under the "Parking" command (13) and that when said parking command is selected by user, it sends said empty parking message to the parking database (5).

6. A mobile parking system as claimed in claim 1, **characterized** in that, the Parking Short Message can be an empty Short Message (17) to be sent, two times frequently to the parking database (5) in order to define the position of MS.

7. A mobile parking system as claimed in claim 1, **characterized** in that, the Parking Command Generator PCG (11, 16, 22) is a short message-based program pre-stored in the memory of MS (1, 7) or in the SIM-cards and is activated by a "Parking" command (13) pre-stored under the option menu (14).

8. A mobile parking system as claimed in claim 1, **characterized** in that, all mobile stations (1, 7) used in this system are portable/mobile/cordless telephones/terminals or any kind of wireless terminal including the Parking Command Generator PCG (11, 16, 22) and the Parking Command (13) pre-stored under the option menu (14) of said mobile stations or their user cards.

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AMENDED SHEET (ARTICLE 19)

STATEMENT UNDER ARTICLE 19

The invention presented in this application provides a function that is fully based on Finnish invention FI941096 (04.07.94). The International Search Report is missing the Finnish invention FI941096, which is fully relevant to the other publications presented there such as WO9611453. The publication *WO961145* is a copy of invention FI941096, thus it cannot be considered relevant to the present application, but indeed FI941096 is fully relevant to WO961145. Moreover, the international search report done for WO961145 is missing the most important document i.e. FI941096 (which is relevant to WO961145). Therefore the publication WO961145 cannot be considered novel or to involve any innovative step. However, the invention presented in this application is focused on the Parking Command Generator and Parking Command (see pages 2-4). Therefore, the claims are focused on the above-mentioned characteristics. The original claims 1-6 include minor changes. Claim 7 is removed, claim 8-9 are unchanged.

Fig 1.

Fig 2.

Fig 3.

22 — PCG

23 — PSM Inquiry

25 —
26 —
24 — Parking Zone:
Street no:
....

Send — 28

29

30

5, 9

1, 7
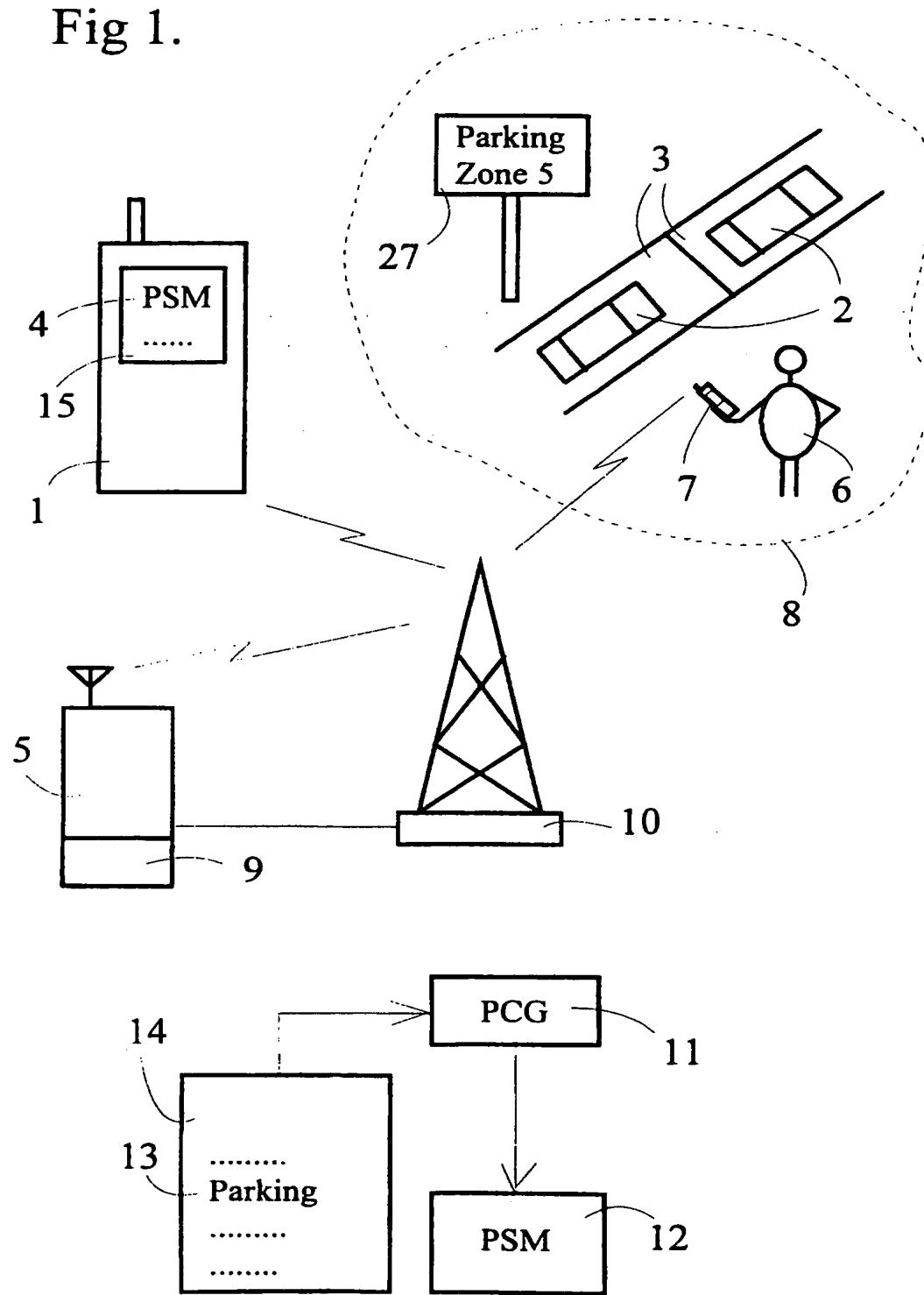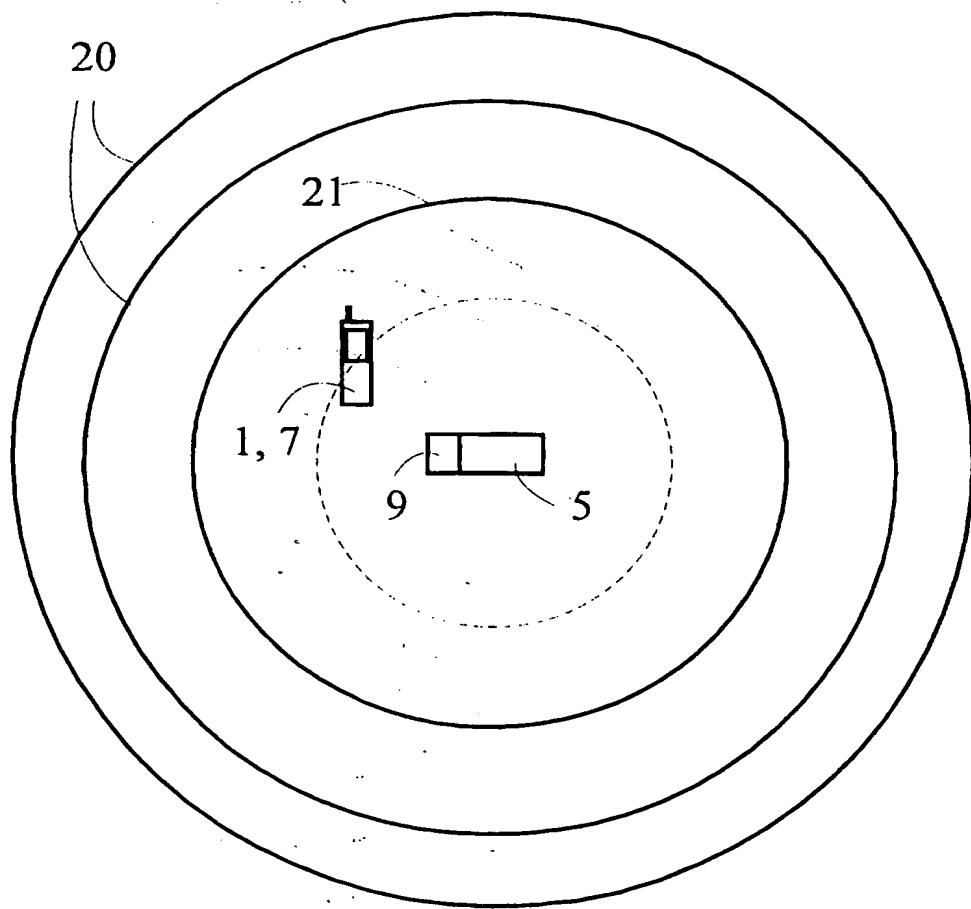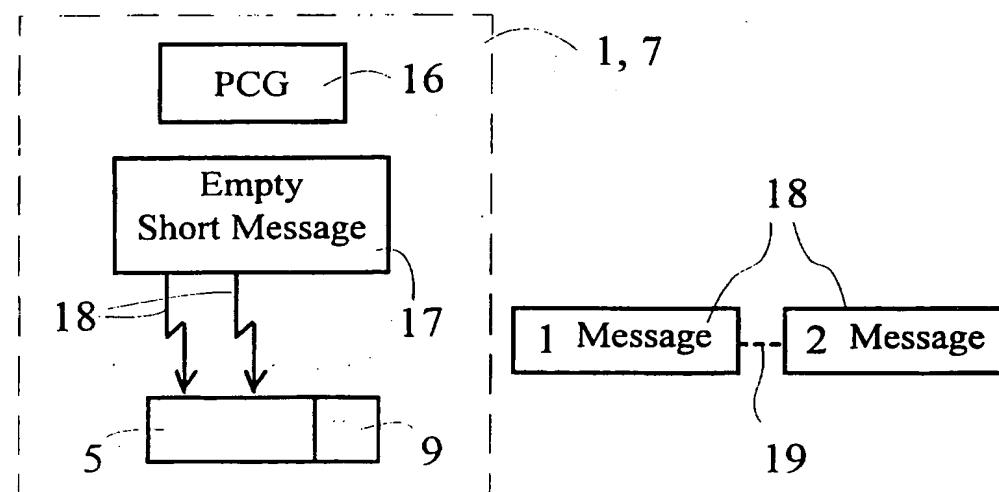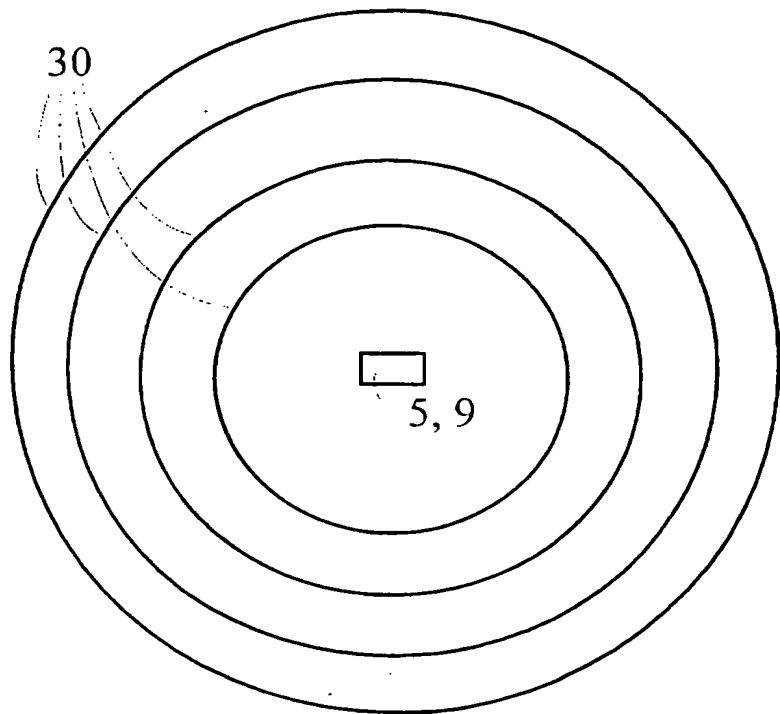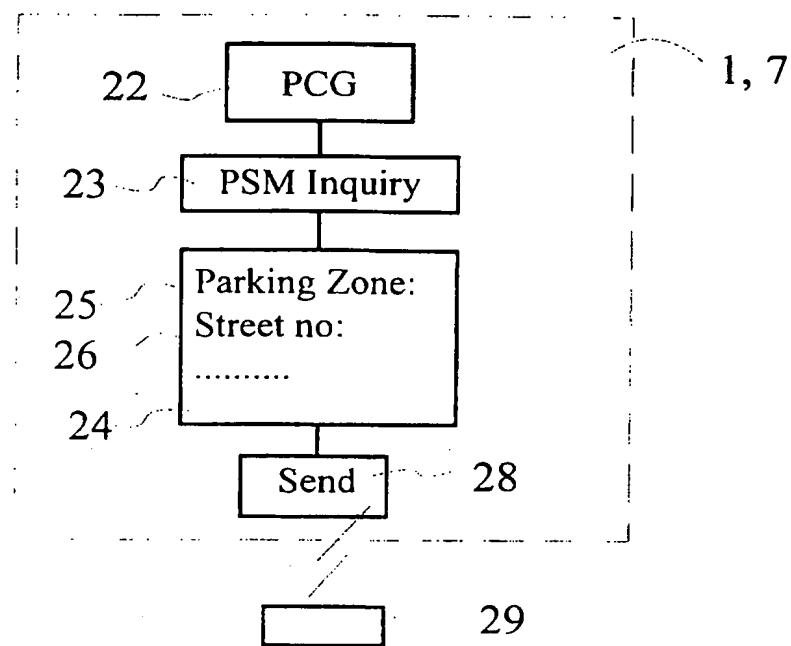
Fig 4.
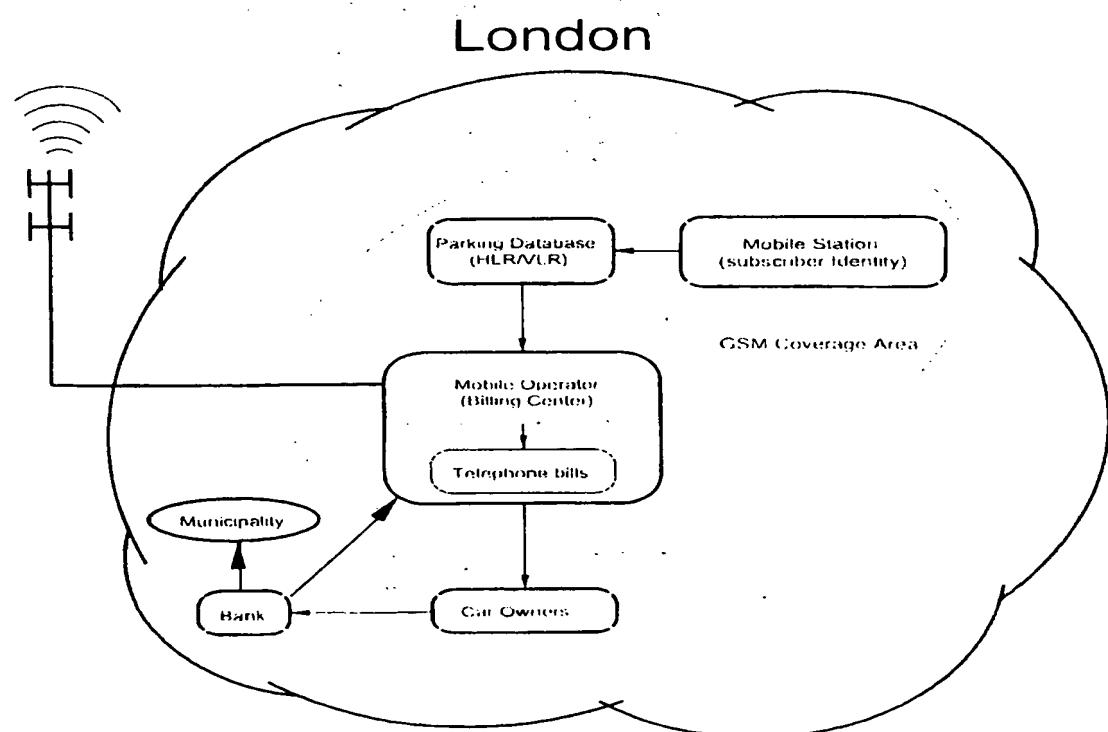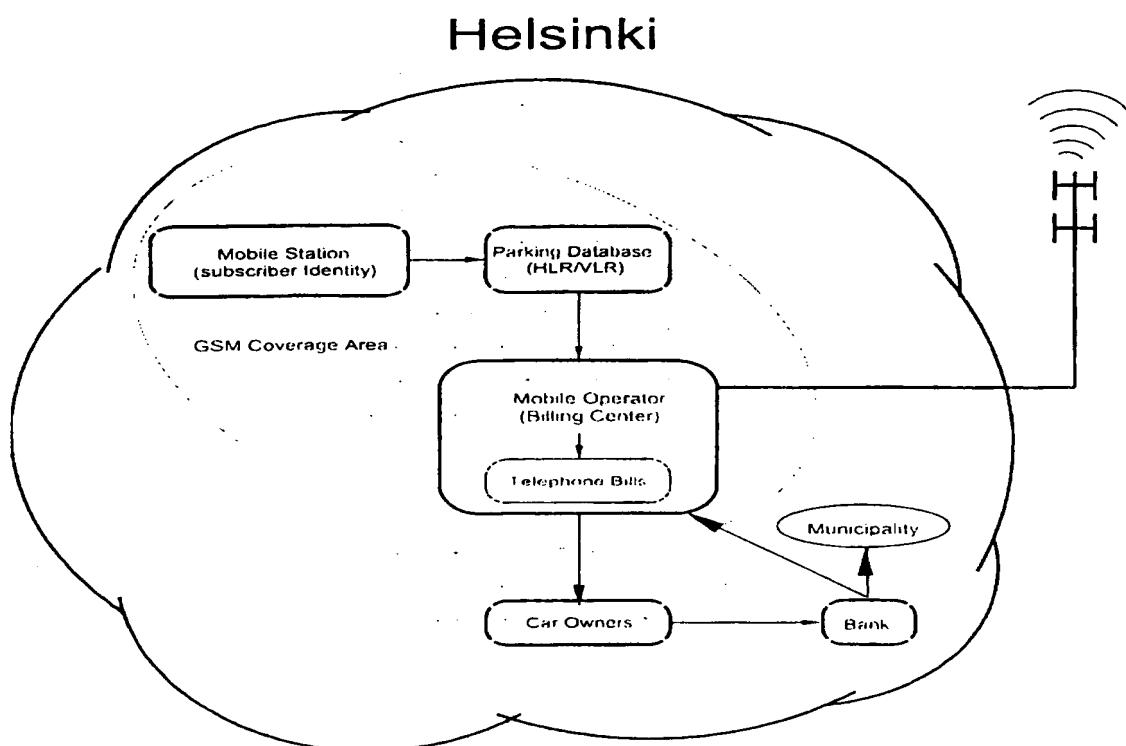
Fig 5.

Parking Database (HLR/VLR)	
Subscriber identity/number	+358-0-465 192
Subscriber's name, address	Mr. Behruz Vazvan
Number of cars owned	1
Vehicle's registration number	ARO-236
- Model	Mercedes, 1992
- Colour	Grey
Parking date	21 March 1993
Arrival time	10.15 AM
Departure time	10.45 AM
Parking zone/Space / Location of MS	2 / 48. Centre, H. St.
Parking time limit / car	No limit / 3 h.
Tariff / 5 min etc.	$ 0.20
After time limit tariff / 5 min etc.	$ 0.40
Free of charge period	05 PM - 07 AM
Free of charge parking spaces /4 h. etc.	156 - 185
Charge / Call for Operator	$ 0.40
Parking charges to the Municipality	$ 1.20
Parking fines	0
Total monthly sum to telephone bill	$ 26
Computing Unit	
Zone or cell-based positioning	Applied
Parking space-based positioning	Applied / NA
Short Message Handler Unit	
Parking Short Message Receiving Unit	
Parking Short Message Transmitting Unit	
Parking zone vehicle data assembling Unit	
Short message/Long message assembling Unit	
Vehicles data transmission to the PCU	

Fig 6.

City	Hamburg	Helsinki
Number of cars	710 000	180 000
Number of public parking spaces	14230	12000
Possible tariff / call	$ 0.40	$ 0.40
Average number of parked cars / day/ parking space	10	10
Operator's minimum revenue from parking calls / day	$ 56920	$ 48000

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Subject: PCT/FI96/00217. Publication of rectification request under
the rule 91.1(f) together with the application.
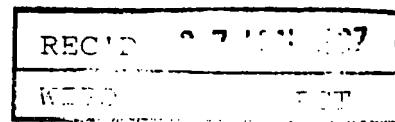
Request for Publication of the Rectification

Hereby WIPO is kindly requested to publish the rectification request including the
letter of request for rectification and the figures 6, 7, and 8 (attached) together with the
above-mentioned application. All together four (4) pages (enclosed) to be published
with the above application, when the publication time becomes relevant.

The required fee (i.e. Special fee for publication of the request for rectification under
PCT Rule 91.1f) has been transferred to WIPO's account (see attached copy).

Sincerely Yours

Behruz Vazvan

Fig 6. Parking Short Message Stream between MS and Parking Database.

Parking Arrival Time Registration Messaging.
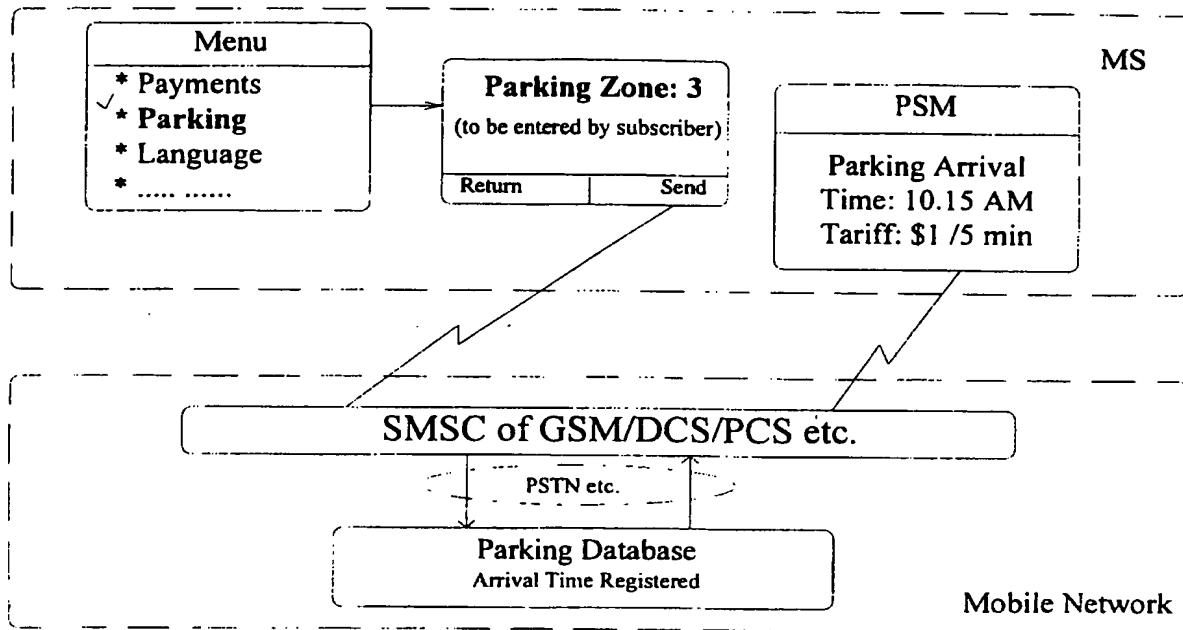
## Parking Departure Time Registration Messaging.
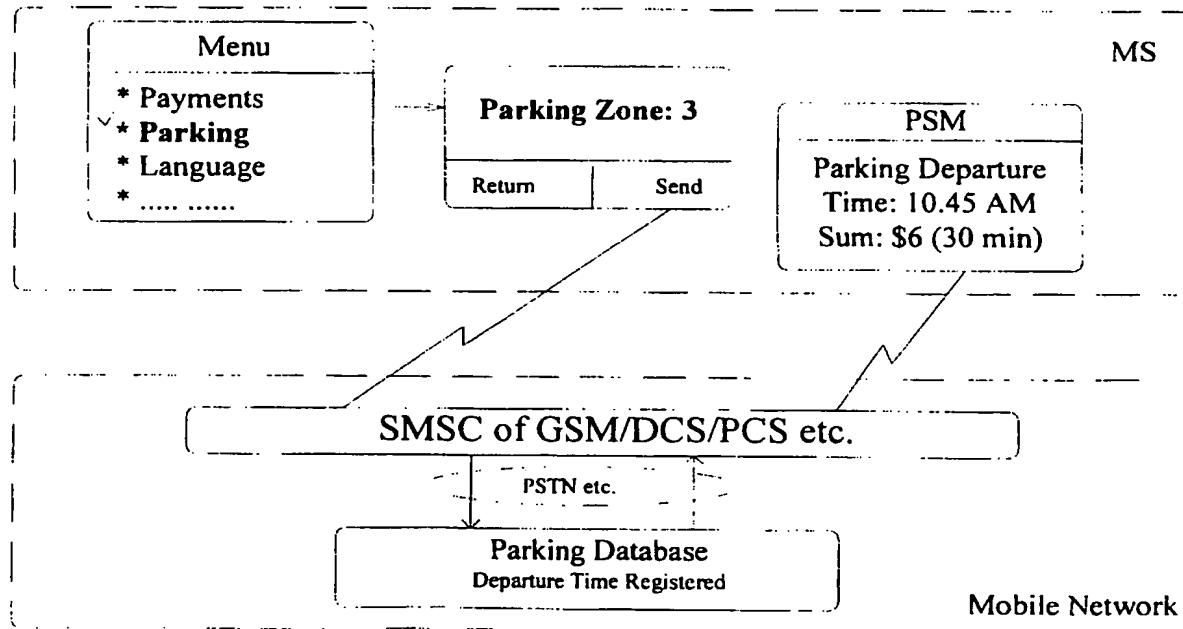
# Fig 7. Parking messaging and parking controlling.
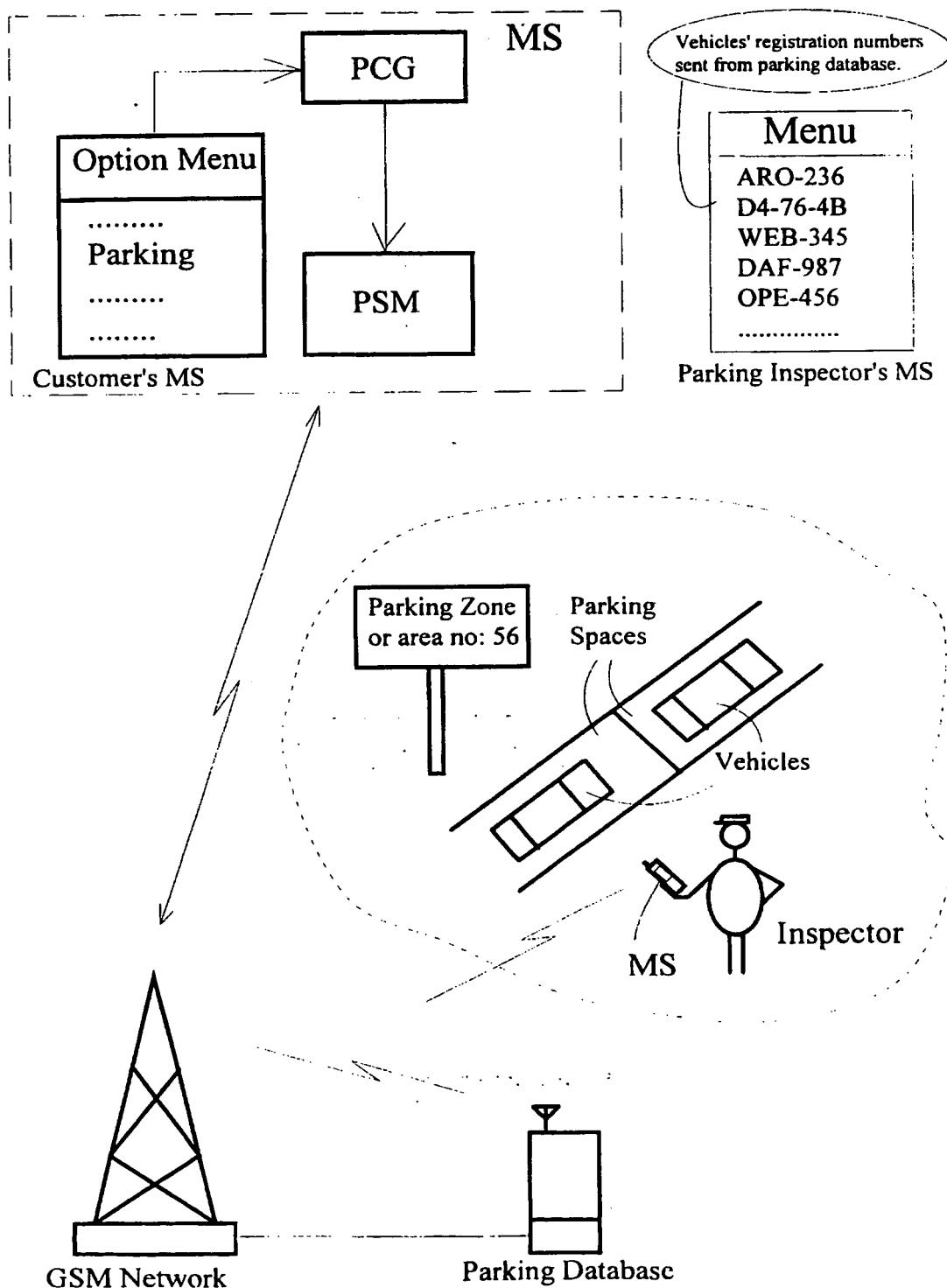
Fig 8. Parking Short Messaging Flow Chart (between the mobile station and parking database).
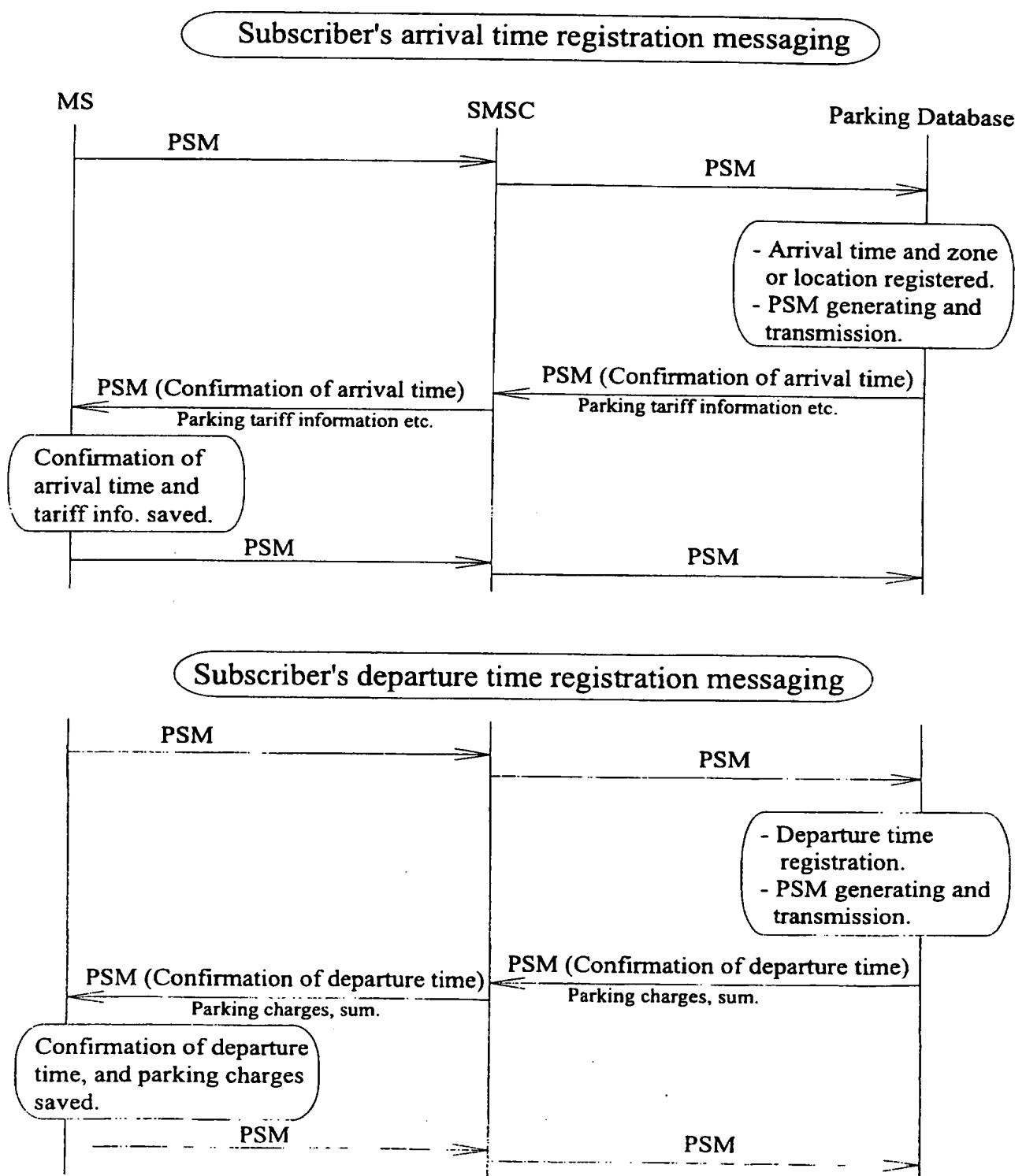
INTERNATIONAL SEARCH REPORT

	International application No.
	PCT/FI 96/00217

A. CLASSIFICATION OF SUBJECT MATTER

IPC6: H04Q 7/22 // G07C 1/30
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC6: G07C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPODOC, WPIL

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 9611453 A1 (PARKIT OY ET AL), 18 April 1996 (18.04.96), page 3, line 17 - line 33; page 5, line 6 - line 19; page 5, line 31 - page 6, line 15	1-6,8,9
Y	page 4, line 15 - line 26	7
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Y	WO 9601531 A2 (KARBASI, AMIR ET AL), 18 January 1996 (18.01.96), page 8, line 19 - page 9, line 30, abstract	7
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A	WO 9320539 A1 (JONSSON, TOMMY), 14 October 1993 (14.10.93), page 2, line 35 - page 3, line 18; page 3, line 30 - page 4, line 19, abstract	1-9
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X	Further documents are listed in the continuation of Box C.	X	See patent family annex.

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2 December 1996	0 4 -12- 1996

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C (Continuation).   DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Behruz Vazvan, "NEW PRODUCTS AND HIGH VALUE ADDED SERVICES FOR MOBILE COMMUNICATIO, 20th-22nd February.", 1996, Technopole Ltd, (Finland), page 9	1-9

International application No.

PCT/FI 96/00217

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
WO-A1- 9611453	18/04/96	AU-A-	3655095	02/05/96
		FI-A-	944738	08/04/96
WO-A2- 9601531	18/01/96	FI-A-	941096	07/01/96
WO-A1- 9320539	14/10/93	AU-A-	3911993	08/11/93
		EP-A-	0634039	18/01/95
		SE-A-	9201001	01/10/93